

5645957**LEAD-ACID BATTERY HAVING A COVER
EXTENDING BEYOND A JAR**

Misra Sudhan; Wagner Franz North Wales, PA, UNITED STATES assigned to C & D Charter Power Systems Inc

A lead-acid cell includes a case, positive and negative plates within the case, microporous separator material between adjacent plates and electrolyte in a starved amount, with the case having jar and covers joined by a weldment along overlapping cover and jars. The positive plates include a grid frame with an intermediate member extending between spaced apart generally peripheral portions of the frame, with pasted active material on the grid frame separated substantially into two portions by the intermediate member. Compressive force is adjustably continuously applied to the positive and negative plates within the case. The plates are suspended within the case at positions removed from the wall of the case, while plate growth is permitted in a manner that plate shorting is avoided.

5645959**BATTERY PLATES WITH
SELF-PASSIVATING IRON CORES AND
MIXED ACID ELECTROLYTE**

Rowlette John J Monrovia, CA, UNITED STATES assigned to Bipolar Power Corporation

The Battery Plates with Self-Passivating Iron Cores and Mixed Acid Electrolyte disclosed and claimed in this patent application solve the problems encountered by previous attempts to construct practical bipolar plates for lead-acid batteries. One of the preferred embodiments of the present invention comprises a novel combination of a self-repairing substrate surrounded by a lead coating resulting in a bipolar plate which is nearly three times lighter than its pure lead counterpart. Since this innovative plate incorporates a core or substrate that is self-passivating under the electrical potential and highly acidic conditions found in the lead-acid battery, any pinholes, gaps, or flaws in the lead coatings are naturally resealed. Another preferred embodiment utilizes a coating of a semi-conducting metal oxide, such

as fluorine-doped stannic oxide, on the positive side of the bipolar plate instead of lead, which further reduces the weight. The self-passivation of the central core is enhanced by combining phosphoric or boric acid with the sulfuric acid electrolyte used in the battery.

FUEL CELL**5634989****AMORPHOUS NICKEL ALLOY HAVING
HIGH CORROSION RESISTANCE**

Hashimoto Koji; Mitsuhashi Akira; Asami Katsuhiko; Kawashima Asahi; Takizawa Yoshio Izumi, JAPAN assigned to Mitsubishi Materials Corporation; Koji Hashimo

A corrosion-resistant amorphous alloy containing Ta in an amount of from 10 to 40 atomic % and Mo, Cr, W, P, B and/or Si is disclosed. This alloy can be prepared by rapidly cooling and solidifying molten alloy, shows a satisfactory corrosion resistance in high-temperature concentrated phosphoric acid, and is adapted to be used as a plant structural material or a separator for a fuel cell.

5637414**METHOD AND SYSTEM FOR
CONTROLLING OUTPUT OF FUEL CELL
POWER GENERATOR**

Inoue Shinichiro; Nagai Tetsuya; Komatsu Tadashi; Wakatsuki Shigeru; Mogi Hiroshi Kawasaki, JAPAN assigned to Fuji Electric Co Ltd

A fuel cell power generator having an output controlling system for preventing the deterioration of the fuel cell performance caused by fuel gas shortages. The fuel cell power generator includes a fuel reformer, a fuel cell, an inverter, and an output controlling system. The output controlling system includes an output control regulator for controlling the output power of the inverter as close to the current value corresponding to the output power set value as possible, a current command computing unit, an inverter controller, and an output correction